

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. **(Currently Amended)** A mobile communication terminal configured to display for displaying a high resolution picture through a low resolution display unit, comprising: including a wireless communication unit configured to receive picture data through a mobile communication network;
a picture data processing unit configured to receive the picture data in picture file format, to extract a minimum number of unit blocks using index information of the picture file formatted data and output a partial picture based upon the minimum number of unit blocks;
a display unit configured to display the partial picture; and
wherein a scroll action operates to change a position of the partial picture within the high resolution picture a wireless transmitting/receiving unit for transmitting and receiving picture data through a mobile communication network, an input unit for receiving a command from the user, a display unit for outputting the picture, and a memory for storing the picture data
the mobile communication terminal comprising a picture data processing unit for outputting a file format picture including a plurality of unit block picture data and indexes for access to each of the block picture data to the display unit,
wherein the picture data processing unit extracts minimum unit block picture data composing a partial picture which will be outputted to the display unit from the picture file by scrolling by using the index information of the picture file format, and outputs the picture.

2. (Currently Amended) The mobile communication terminal of claim 1, further comprises~~wherein the memory comprises~~:

a memory configured to store the picture data and the picture in picture file format including a plurality of unit blocks and indexes, the memory further including;

a screen frame buffer configured to buffer for buffering the partial picture which will be outputted to the display unit, unit; and

a decoding frame buffer configured to buffer for buffering the unit blocks of picture data~~each unit block including the partial picture which will be~~ outputted to the display unit, and the picture data processing unit comprises~~further comprising~~:

a decoding block selecting unit for selecting~~configured to select~~ the minimum number of unit blocks of file formatted data that comprise~~composing~~ the partial picture ~~which will be to be~~ outputted to the display unit, and extracting~~; and extract~~ the selected unit blocks of picture data from the picture file formatted data by using the index information ~~of the picture file format~~; and

a decoding frame generating unit for buffering~~configured to buffer~~ the picture files of the extracted blocks in the decoding frame buffer so that the picture included in the blocks buffered in the decoding frame buffer and outputted to the display unit can be buffered in the screen frame buffer and displayed the unit blocks of picture data extracted from the decoding frame buffer, so that the unit blocks of picture data can be buffered in the screen frame buffer and displayed.

3. (Currently Amended) The mobile communication terminal of claim 1, wherein the picture data processing unit further comprises a selected block decompressing unit configured to decompress~~for decompressing~~ each of the extracted unit blocks of picture data.

4. (Currently Amended) The mobile communication terminal of claim 1, wherein the picture file formatted data format comprises~~comprise~~ picture header information including a size of the whole picture and a size of each unit block of picture data; and, and

wherein the picture data processing unit further comprises a supplementary information display unit configured to extract~~for extracting~~ the picture header information ~~of the picture file format~~ from the picture file formatted data format, and displaying output the information ~~on the~~to the display unit.

5. (Currently Amended) The mobile communication terminal of claim 1, wherein the picture file format comprises supplementary information including at least one of a thumbnail of the high resolution picture, location information of an initial display block and picture summary text information; and, and

wherein the picture data processing unit further comprises a supplementary information display unit configured to extract~~for extracting~~ the supplementary information ~~of the picture file format~~ from the picture file formatted data format, and display~~displaying~~ the supplementary information on the supplementary display unit.

6. (Currently Amended) The mobile communication terminal of claim 1, further comprising a format converting unit configured to convert~~for converting~~ the picture data from the wireless transmitting/receiving unit into a picture file formatted data format including a plurality of unit blocks of picture data and indexes for providing access to each block of picture data, and configured to store~~storing~~ the picture file formatted data format in the memory.

7. (Currently Amended) The mobile communication terminal of claim 6, wherein the format converting unit comprises:

a picture dividing unit configured to divide~~for dividing~~ the picture data into the plurality of unit blocks of picture data; and

a storing unit configured to generate~~for generating~~ the indexes for each of the divided unit blocks of picture data; and to store~~storing~~ the picture the file formatted picture including the index information and each of the unit block of picture data based on the index information in the memory.

8. (Currently Amended) The mobile communication terminal of claim 7, wherein the format converting unit further comprises a compressing unit configured to individually compress~~for individually compressing~~ each of the divided blocks; and; and

wherein the storing unit is configured to store~~stores~~ the compressed unit blocks of picture data in the memory.

9. (Currently Amended) The mobile communication terminal of claim 7, wherein the format converting unit further comprises a decompressing unit configured to decompress~~for decompressing~~ the compressed picture data from the wireless transmitting/receiving~~communication~~ unit.

10. (Currently Amended) The mobile communication terminal of claim 7, wherein the storing unit is configured to generate ~~generates~~ a picture header including a size of the whole picture and a size of each unit block, and stores~~-store~~ the picture header in the memory with each unit block~~-data~~.

11. (Currently Amended) The mobile communication terminal of claim 7, wherein the storing unit is configured to generate ~~generates~~ supplementary information including at least one of a thumbnail of the picture, location information of an initial display block and picture summary text information, and stores~~-store~~ the information in the memory with each unit block~~-data~~.

12. (Currently Amended) The mobile communication terminal of claim 6, further comprising an external input port configured to receive~~for receiving~~ picture data from an external device~~,device~~:

wherein the format converting unit is configured to convert ~~converts~~ the picture data from the external input port into a picture file formatted~~data format~~ including a plurality of unit block~~blocks~~ of picture data and indexes for access to each unit block~~of~~ picture data, and stores~~-store~~ the picture file format in the memory.

13. (Currently Amended) The mobile communication terminal of claim 12, wherein the external device is a camera connected to the external input port~~of~~ the mobile communication terminal ~~and the external input port~~.

14. (Currently Amended) A method for outputting a file format~~formatted~~ picture including~~a~~ plurality of unit block~~picture~~ data and indexes for access to each block~~picture~~ data to a display unit in a mobile communication terminal, the method comprising~~:the mobile~~

~~communication terminal comprising a wireless transmitting/receiving unit for transmitting and receiving the picture data through a mobile communication network, an input unit for receiving a command from the user, a display unit for outputting the picture, and a memory for storing the picture data;~~

~~the method for displaying a high resolution picture in the mobile communication terminal, comprising:~~

receiving picture data through a mobile communications network;

formatting the received picture data into picture file formatted data including a plurality of unit blocks of picture data and index information;

an initial picture output step for extracting a minimum number of unit blocks of picture data from the picture file formatted data;

generating/composing a partial picture using the extracted minimum number of unit blocks and the index information; and

outputting the partial picture which will be initially outputted to the display unit from the picture file by using the index information of the picture file format, and outputting the initial picture; and

a moved picture output step for extracting the corresponding unit blocks of picture data from the picture file formatted data in a in the movement direction by using the index information of the picture file format, and outputting the outputting a position-moved picture based on an accordance with generation of scroll action generated during the display of the picture.

15. (Currently Amended) The method of claim 14, wherein the picture file formatted data file format comprises picture header information including a size of the whole picture and a size of each unit block of picture data, the method further comprising a step for extracting the picture header information of the picture file formatted data file format from the picture file, and displaying the picture header information on the picture header display unit.

16. (Currently Amended) The method of claim 14, wherein the picture file formatted data file format comprises supplementary information including at least one of a thumbnail of the picture, location information of an initial display block and picture summary text information, the

method further comprising ~~a step for extracting the supplementary information of the picture file formatted data file format from the picture file format, and display~~ ~~displaying~~ the supplementary information on the supplementary display unit.

17. (Currently Amended) The method of claim 14, wherein the memory comprises a screen frame buffer configured to buffer for buffering the partial picture ~~picture which will be~~ outputted to the display unit, and a decoding frame buffer configured to buffer for buffering each unit block of picture data ~~including the picture which will be~~ outputted to the display unit, and the method further comprising:

~~the initial picture output step comprises the steps of:~~

~~selecting the~~ a minimum number of unit blocks of picture data necessary to generate ~~composing a~~ the partial picture ~~which will be~~ outputted to the display unit, and extracting the selected unit blocks of picture data from the picture file formatted data ~~by~~ using the index information of the associated unit blocks ~~picture file format~~;

~~buffering the picture data of the extracted unit blocks of picture data~~ in the decoding frame buffer; and

~~buffering the picture included in the blocks buffered in the decoding frame buffer and output~~ outputting the partial picture in the screen frame buffer ~~to the display unit in the screen frame buffer and displaying the picture~~.

18. (Currently Amended) The method of claim 17, further comprising ~~a step for~~ decompressing each of the extracted unit blocks of picture data after ~~the step for~~ extracting the unit block picture data and before ~~the step for~~ buffering the picture data of the extracted unit blocks in the decoding frame buffer.

19. (Currently Amended) The method of claim 14, wherein the memory comprises a screen frame buffer configured to buffer for buffering the partial picture ~~which will be~~ outputted to the display unit, and a decoding frame buffer configured to buffer for buffering each unit block of picture data ~~including the picture which will be~~ outputted to the display unit, and

wherein outputting the moved picture ~~output step~~ comprises ~~the steps of:~~

calculating the movement a movement position based on a in accordance with generation of scroll action executed during the display of the partial picture;

re-selecting the minimum unit blocks of picture data of composing the partial picture which will be outputted to the display unit in the movement direction, and deciding determining whether the selected unit blocks of picture data exist in the decoding frame buffer; and

buffering the contents of the decoded frame buffer in the corresponding movement position of the screen frame buffer and displaying the partial picture based a determination that when the re-selected unit blocks of picture data exist in the decoding frame buffer, buffering the contents of the decoding frame buffer in the corresponding position in the screen frame buffer, and displaying the picture.

20. (Currently Amended) The method of claim 19, comprising the steps of further comprising:

prior to displaying the partial picture, extracting the unit blocks of picture data from the picture file formatted data in the corresponding movement direction using index information when the re-selected unit blocks of picture data do not exist in the decoding frame buffer; prior to the step for displaying the picture, extracting block picture data from the picture file in the corresponding direction by using the index information of the picture file format; and

buffering the picture file of the extracted blocks in the decoding frame buffer; and
correcting to correct the decoding frame buffer.

21. (Currently Amended) The method of claim 20, further comprising a step for decompressing each of the extracted unit blocks of picture data, after the step for extracting the selected unit block picture data and before the step for correcting the decoding frame buffer.

22. (Currently Amended) The method of claim 14, further comprising: a format converting step for

dividing the picture data from the wireless communication transmitting/receiving unit into a plurality of unit blocks, blocks of picture data;

converting the unit blocks of picture data into a picture file formatted data with indexes format including a plurality of unit block picture data and indexes for providing access to each unit block of picture data; and, and

storing the picture file formatted data format in the memory before outputting the initial partial picture output step.

23. (Currently Amended) The method of claim 22, wherein the format converting step comprises further comprising:

dividing the picture data from the wireless transmitting/receiving unit into a plurality of unit blocks of picture data;

generating indexes for each of the divided unit blocks of picture data; and

generating a converted file according to the picture file formatted data format including the index information and each of the unit block picture data based on the index information.

24. (Currently Amended) The method of claim 23, further comprising a step for compressing each of the divided plurality of unit blocks of picture data by blocks, after the step for dividing the picture data into the plurality of unit blocks.

25. (Currently Amended) The method of claim 23, further comprising a step for:

generating a picture header including a size of the whole picture and a size of each unit block, block after the step for dividing the picture data into the plurality of unit blocks and before the step for generating the converted file, file;

wherein the step for generating the converted file generates the converted file including the picture header.

26. (Currently Amended) The method of claim 23, further comprising a step for generating supplementary information including at least one of a thumbnail of the picture, location information of an initial display block and picture summary text information, information after the step for dividing the picture data into the plurality of unit blocks and before the step for generating the converted file, file,

wherein the step for generating the converted file generates the converted file including the supplementary information.

27. (Currently Amended) A system configured to convert ~~for converting~~ a picture file format, the system comprising a format converting server connected to a packet data service node and a picture providing server of a mobile communication system, the system configured to display the picture data format from the picture providing server in a mobile communication system, the mobile communication terminal comprising:

a base transceiver system configured to perform ~~for performing~~ wireless area communication with the mobile communication terminal,terminal;

a base station controller configured to control~~for controlling~~ the base transceiver system,system;

a packet data service node connected to the base station controller, the packet data service node configured to provide~~for providing~~ data services to the mobile communication terminal,terminal; and

a picture providing server configured to provide~~for providing~~ picture data to the mobile communication terminal through the packet data service node,node,

wherein the format converting server comprises:

a received file database configured to store~~for storing~~ picture data from at least one of the mobile communication terminal ~~or picture~~and picture providing server, and a converted file database configured to store~~for storing~~ a format-converted file of the picture data;

a picture data receiving unit configured to receive~~for receiving~~ the picture data from the mobile communication terminal ~~or~~ picture providing server;

a picture dividing unit configured to divide~~for dividing~~ the picture of the picture data into a plurality of unit blocks;

a storing unit configured to generate~~for generating~~ indexes of each of the divided unit blocks, the storing unit further configured to generate~~generating~~ a file converted into a picture file format including the picture data and indexes of each unit block, and further configured to store~~storing~~ the converted file in the converted file database; and

a converted file transmitting unit configured to transmit~~for transmitting~~ the converted file to the mobile communication terminal or picture providing server.

28. **(Currently Amended)** The system of claim 27, wherein the storing unit is configured to generate~~generates~~ a picture header including a size of the whole picture and a size of each unit block of picture data, and to store the~~stores~~ a converted file, including the picture header.

29. **(Currently Amended)** The system of claim 27, wherein the storing unit is configured to generate~~generates~~ supplementary information including at least one of a thumbnail of the picture, location information of an initial display block and picture summary text information, and stores a~~the~~ converted file, including the supplementary information.

30. **(Currently Amended)** The system of claim 27, wherein the format converting server further comprises a compressing unit configured to individually compress~~for individually compressing~~ each of the divided blocks, and the storing unit is configured to store the~~stores~~ a converted file, including the compressed unit blocks of picture data in the converted file database.

31. **(Currently Amended)** The system of claim 27, wherein the format converting server further comprises a decompressing unit configured to decompress~~for decompressing the~~ compressed picture data from the mobile communication terminal or picture providing server.

32. **(Currently Amended)** A method ~~for displaying~~of displaying a high resolution picture in a mobile communication terminal in a system for converting a picture file format comprising:

a format converting server, the format converting server ~~being~~ connected to a packet data service node and a picture providing server of a mobile communication system and converting the format of the picture data, the mobile communication system comprising:

a base transceiver system configured to for performing~~wirelessly communicate-area communication~~ with the mobile communication terminal~~terminal~~,

a base station controller configured to control~~for controlling~~ the base transceiver system~~system~~,

a packet data service node connected to the base station controller and configured to provide for providing data services to the mobile communication terminal; and, and

a picture providing server configured to provide for providing picture data to the mobile communication terminal through the packet data service node; the method for displaying the high resolution picture in the mobile communication terminal, comprising:

the method for displaying the high resolution picture in the mobile communication terminal, comprising:

dividing, at the format converting server, the picture picture data received from the mobile communication terminal or picture providing server, into a plurality of unit blocks;

generating indexes for access that provide access to each of the divided unit block of picture data; and

generating a file converted into the into picture file format, including the index information and each of the unit blocks.

33. (Currently Amended) The method of claim 32, further comprising, a step for compressing each of the divided unit blocks of picture data by blocks, after the step for dividing the picture data into the plurality of unit blocks.

34. (Currently Amended) The method of claim 32, further comprising, a step for generating a picture header including a size of the whole picture and a size of each unit block, after the step for dividing the picture data into the plurality of unit blocks and before the step for generating the converted picture file; file,

wherein the step for generating the converted picture file generates a converted picture file of formatted picture data including the picture header.

35. (Currently Amended) The method of claim 32, further comprising, a step for generating supplementary information including at least one of a thumbnail of the picture, location information of an initial display block and picture summary text information, after the step for dividing the picture data into the plurality of unit blocks and before the step for generating the converted file,

wherein ~~the step for~~ generating the converted file generates a converted file including the supplementary information.